AMERICAN

CHEMICAL JOURNAL

IRA REMSEN

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VOL. XLVI.—JULY–DECEMBER, 1911

BALTIMORE: THE EDITOR

ESCHENBACH PRINTING COMPANY, PRINTERS
EASTON, PA.

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$C_9H_{10}O_4N_2S$. Ethyl ester of 2-[β-hydroxy-α-carboxyethenyl-mercapto]-4-keto-3,4 - dihydro - 1,3 - diazine. *Johnson* and *Shepard*..... 351

$C_9H_{11}O_5NS$. 2-Ethylaminobenzene-1-carboxylic-4-sulphonic acid. *Kastle* and *Hadin*..... 516

$C_9H_{12}O_3N_2S$. Ethyl ester of 2-carboxymethylmercapto-4-keto-6-methyl-3,4-dihydro-1,3-diazine. *Johnson* and *Shepard*..... 355

C_{10}-GROUP

10 II

$C_{10}H_{16}O_4$. 1,2,2 - Trimethyltetrahydro - R - pentene - 1,3 - dicar - boxylic acid (camphoric acid). *Wightman* and *Jones*..... 102

10 III

$C_{10}H_{10}O_4N_2$. β-Benzoylureinoacetic acid. *Wheeler, Nicolet* and *Johnson*..... 467

$C_{10}H_{12}O_3N_2$. 2,4,6 - Triketo - 5,5 - di[β - propenyl]hexahydro - 1,3-diazine. *Johnson* and *Hill*..... 542

$C_{10}H_{13}O_2N_3$. 2 - Imino - 4,6 - diketo - 5,5 - di[β - propenyl]hexa - hydro-1,3-diazine. *Johnson* and *Hill*..... 543

10 IV

$C_{10}H_8O_3N_4S_2$. Compound obtained from thiourea and diethyl 6-oxy-4-methylpyrimidine-2-oxalthioglycollate. *Johnson* and *Shepard*..... 360

$C_{10}H_8ON_2S$. 2 - Thio - 5 - keto - 4 - benzaltetrahydro - 1,3 - diazole. *Wheeler, Nicolet* and *Johnson*..... 470

$C_{10}H_9O_3NBr_2$. Ethyl 2,4-dibrom-6-nitro-3-methylphenyl ester of carbonic acid. *Raiford*..... 435

$C_{10}H_{10}O_3N_2S$. β-Benzoylthioureinoacetic acid. *Wheeler, Nicolet* and *Johnson*..... 468

$C_{10}H_{11}O_2NBr_2$. (1) Ethyl ester of 3,5-dibrom-2-hydroxy-4-methyl-phenylaminoformic acid. *Raiford*..... 433

(2) Ethyl ester of 3,5-dibrom-4-hydroxy-6-methylphenyl-aminoformic acid. *Raiford*..... 429

$C_{10}H_{12}O_4N_2S$. Ethyl ester of 2-[α-carboxyl-β-hydroxyethenylmer-capto]-4-keto-6-methyl-3,4-dihydro-1,3-diazine. *Johnson* and *Shepard*..... 357

C_{11}-GROUP

11 IV

$C_{11}H_{11}O_2NBr_2$. 2,4-Dibrom-6-acetylamino-3-methylphenyl ester of acetic acid. *Raiford*..... 434

$C_{11}H_{12}O_2NCl$. Acetate of 6-chlor-4-acetylamino-5-methyl-1-hy-droxybenzene. *Raiford*..... 449

C_{12}-GROUP

12 II

$C_{12}H_{12}O_2$. Isomeric methyl esters of δ-phenyl-α,γ-butadiene-α-carboxylic acid. *Reynolds* 200

12 III

$C_{12}H_{14}O_4N_2$. [Benzoyliminoethoxymethyl]aminoacetic acid. *Wheeler, Nicolet* and *Johnson* 466

12 IV

$C_{12}H_{10}O_2N_2S$. 2-Thio-4-keto-1-acetyl-4-benzaltetrahydro-1,3-diazole. *Wheeler, Nicolet* and *Johnson* 472

$C_{12}H_{14}O_4N_2S$. (1) Ethyl ester of β-benzoylthioureinoacetic acid. *Wheeler, Nicolet* and *Johnson* 468

(2) [Benzoyliminoethylmercaptomethyl]aminoacetic acid. *Wheeler, Nicolet* and *Johnson* 471

$C_{12}H_{14}O_6N_2S$. Diethyl ester of 2-[α,β-dicarboxyl-β-ketoethylmercapto]-4-keto-3,4-dihydro-1,3-diazine. *Johnson* and *Shepard* 352

C_{13}-GROUP

13 II

$C_{13}H_{14}O_4$. ε-Phenyl-α-pentene-δ,δ-dicarboxylic acid. Ag_2. *Johnson* and *Hill* 545

13 III

$C_{13}H_9NCl_2$. *cis*- and *trans*-Chloriminophenyl-4-chlorphenylmethanes. *Peterson* 333

$C_{13}H_{10}NCl$. (1) Iminophenyl-4-chlorphenylmethane. + HCl. *Peterson* 332

(2) Chloriminodiphenylmethane. *Peterson* 329

$C_{13}H_{16}O_4N_2$. Ethyl ester of [benzoyliminomethoxymethyl]aminoacetic acid. *Wheeler, Nicolet* and *Johnson* 466

13 IV

$C_{13}H_{16}O_6N_2S$. Diethyl ester of 4-keto-6-methyl-2-[α,β-dicarboxyl-β-ketoethylmercapto]-3,4-dihydro-1,3-diazine. *Johnson* and *Shepard* 359

$C_{13}H_{13}O_5NS$. Diethyl ester of 2-ethylaminobenzene-1-carboxylic-4-sulphonic acid. *Kastle* and *Hadin* 510

13 V

$C_{13}H_{13}O_8N_2BrI$. Diethyl ester of 2-brom-3-iod-4,6-dinitrophenylmethanedicarboxylic acid. *Jackson* and *Bigelow* 565

C_{14}-GROUP

14 II

$C_{14}H_{12}O_3$. Hydroxydiphenylmethanecarboxylic acid. Na (p. 67). *Wightman* and *Jones* 74

$C_{14}H_{22}O_8$. Tetraethyl ester of ethane-$\alpha,\alpha,\beta,\beta$-tetracarboxylic acid. *Jackson* and *Bigelow* 563

14 III

$C_{14}H_{11}O_2Cl$. (1) 2-Chlorphenyl-4-methoxyphenyl ketone. *Peterson*..... 344
(2) 4-Chlorphenyl-4-methoxyphenyl ketone. *Peterson*..... 339
$C_{14}H_{13}ON$. Iminophenyl-4-methoxyphenylmethane. + HCl. *Peterson*..... 335
$C_{14}H_{14}O_3N_2$. 2,4,6 - Triketo - 5 - [β - propenyl] - 5 - phenylmethyl - hexahydro-1,3-diazine. *Johnson* and *Hill*..... 544
$C_{14}H_{15}O_2N_3$. 2 - Imino - 4,6 - diketo - 5 - [β - propenyl] - 5 - phenyl - methylhexahydro - 1,3 - diazine. + 0.5HCl (p. 547). *Johnson* and *Hill*..... 547
$C_{14}H_{17}O_3N_3$. ε - Keto - ε - iminoureino - δ - phenylmethyl - α - pentene-δ-carboxylic acid. *Johnson* and *Hill*..... 546
$C_{14}H_{18}O_4N_2$. Ethyl ester of [benzoyliminoethoxymethyl]amino-acetic acid. *Wheeler, Nicolet* and *Johnson*..... 466

14 IV

$C_{14}H_{11}ONCl_2$. *cis*- and *trans*-Chlorimino-4-chlorphenyl-4-methoxy-phenylmethanes. *Peterson*..... 342
$C_{14}H_{11}O_2NBr_2$. 2,6-Dibrom-4-benzoylamino-1-hydroxy-3-methyl-benzene. *Raiford*..... 429
$C_{14}H_{12}ONCl$. (1) Imino - 4 - chlorphenyl - 4 - methoxyphenyl-methane. + HCl. *Peterson*..... 340
(2) *cis*- and *trans*-Chloriminophenyl-4-methoxyphenylmeth-anes. *Peterson*..... 337
$C_{14}H_{18}O_3N_2S$. Ethyl ester of [benzoyliminoethylmercaptomethyl]-aminoacetic acid. *Wheeler, Nicolet* and *Johnson*..... 471

C_{16}-GROUP

15 II

$C_{15}H_{20}O$. γ-Hydroxy-γ-ethyl-η-phenyl-δ,ζ-heptadiene. *Reynolds*.. 210

C_{17}-GROUP

17 II

$C_{17}H_{18}O_3$. Lactone of δ-hydroxy-β,δ-diphenyl-α,γ-butadiene-α-carboxylic acid. *Kohler*..... 497
$C_{17}H_{16}O_4$. Lactone of γ-hydroxy-δ-keto-β,δ-diphenyl-α-butene-α-carboxylic acid. *Kohler*..... 491
$C_{17}H_{14}O_2$. β,δ-Diphenyl-α,γ-butadiene-α-carboxylic acid. *Kohler, Heritage* and *Macleod*..... 223
$C_{17}H_{14}O_3$. (1) δ-Keto-β,δ-diphenyl-β-butene-α-carboxylic acid. *Kohler*..... 489
(2) Lactone of β-hydroxy-δ-keto-β,δ-diphenylbutane-α-car-boxylic acid. *Kohler*..... 493
(3) Lactone of γ-hydroxy-δ-keto-β,δ-diphenylbutane-α-car-boxylic acid. *Kohler*..... 500

(4) Lactone of δ,δ-dihydroxy-β,δ-diphenyl-β-butene-α-carboxylic acid. *Kohler* 498
(5) Acid from β-hydroxy-δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid lactone. *Kohler* 492
$C_{17}H_{16}O_3$. β-Hydroxy-β,δ-diphenyl-γ-butene-α-carboxylic acid. *Kohler, Heritage* and *Macleod* 223
$C_{17}H_{16}O_4$. γ-Hydroxy-δ-keto-β,δ-diphenylbutane-α-carboxylic acid. *Kohler* 501

17 III

$C_{17}H_{14}O_3Br_2$. Stereomeric β,γ-dibrom-δ-keto-β,δ-diphenyl-butane-α-carboxylic acids. *Kohler* 490
$C_{17}H_{15}O_3Br$. (1) β-Brom-δ-keto-β,δ-diphenylbutane-α-carboxylic acid. *Kohler* 494
(2) Stereomeric γ-brom-δ-keto-β,δ-diphenylbutane-α-carboxylic acids. *Kohler* 499

17 IV

$C_{17}H_{12}O_2N_2S$. 2-Thio-5-keto-1-benzoyl-4-benzaltetrahydro-1,3-diazole. *Wheeler, Nicolet* and *Johnson* 469

C_{18}-GROUP

18 II

$C_{18}H_{14}O_5$. (1) δ-Keto-β,δ-diphenyl-β-butene-α,α-dicarboxylic acid. K, $K_2 + 2H_2O$. *Kohler* 486
(2) Lactone of β-hydroxy-δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid. $+ 2H_2O$. *Kohler* 487
(3) Lactone of δ,δ-dihydroxy-β,δ-diphenyl-β-butene-α,α-dicarboxylic acid. *Kohler* 488
$C_{18}H_{18}O_2$. β-Phenylmethyl-δ-phenyl-γ-butene-α-carboxylic acid. *Reynolds* 208
$C_{18}H_{18}O_3$. Stereomeric ε-keto-γ,ε-diphenylpentane-β-carboxylic acids. *Kohler, Heritage* and *Macleod* 225

18 III

$C_{18}H_{17}O_3Cl$. Methyl ester of β-chlor-δ-keto-β,δ-diphenylbutane-α-carboxylic acid. *Kohler* 490
$C_{18}H_{17}O_3Br$. Methyl esters of the stereomeric γ-brom-δ-keto-β,δ-diphenylbutane-α-carboxylic acids. *Kohler* 499

C_{19}-GROUP

19 II

$C_{19}H_{18}O_3$. Lactone of ε-hydroxy-β-methyl-γ,ε-diphenyl-δ-pentene-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 229
$C_{19}H_{18}O_3$. Stereomeric lactones of δ-hydroxy-ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 232

$C_{19}H_{20}O_2$. Methyl ester of β-phenylmethyl-δ-phenyl-γ-butene-α-carboxylic acid. *Reynolds* 209

$C_{19}H_{20}O_3$. (1) Methyl ester of ε-keto-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 226

(2) ε-Keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 230

(3) ζ-Keto-δ,ζ-diphenylhexane-γ-carboxylic acid. *Kohler, Heritage* and *Macleod* 228

(4) Stereomeric α,β-lactones of β,δ-dihydroxy-β,δ-diphenylhexane-α-carboxylic acid. *Kohler* 495

(5) α,γ-Lactone of γ,δ-dihydroxy-β,δ-diphenylhexane-α-carboxylic acid. *Kohler* 502

$C_{19}H_{20}O_4$. δ-Hydroxy-ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 234

19 III

$C_{19}H_{19}O_3Br$. δ-Brom-ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 231

C_{20}-GROUP

20 II

$C_{20}H_{18}O_5$. Dimethyl ester of δ-keto-β,δ-diphenyl-β-butene-α,α-dicarboxylic acid. *Kohler* 484

$C_{20}H_{20}O_5$. Dimethyl ester of δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid. *Kohler, Heritage* and *Macleod* 234

$C_{20}H_{22}O_3$. (1) Ethyl ester of ε-keto-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 227

(2) Stereomeric ethyl esters of γ-hydroxy-γ,ε-diphenyl-δ-pentene-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 225

(3) Methyl ester of ε-keto-β-methyl-γ,ε-diphenylpentene-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 231

(4) Methyl ester of ζ-keto-δ,ζ-diphenylhexane-γ-carboxylic acid. *Kohler, Heritage* and *Macleod* 228

20 III

$C_{20}H_8O_7Cl_4$. 4,5,5′-Trihydroxy-4′-keto-1′,4′-dihydroxanthane-7-[3,4,5,6-tetrachlorbenzene-2-carboxylic acid] (tetrachlorgallein). $NH_4 + 3.5H_2O$ (p. 35). $(NH_4)_4$ (pp. 32, 48). $K + 3.5H_2O$ (p. 49). *Orndorff* and *Delbridge* 32

$C_{20}H_9O_7Cl_3$. 4′-O-Hydrochloride of 4,5,5′-trihydroxy-4′-keto-1′,4′-dihydroxanthane-7-[3,4,5,6-tetrachlorbenzene-2-carboxylic acid] (tetrachlorgallein hydrochloride). *Orndorff* and *Delbridge* 19

$C_{20}H_{10}O_8Cl_4$. (1) 4,5,7,4′,5′-Pentahydroxyxanthane-7-[3,4,5,6-tetrachlorbenzene-1-carboxylic acid] (tetrachlorgalleincarbinolcarboxylic acid). *Orndorff* and *Delbridge* 37

(2) 7,7²-Anhydride of 4,5,7,4′,5′-pentahydroxy-7-[3,4,5,6-tetrachlor-2-trihydroxymethylphenyl]xanthane (colorless tetrachlorgallein hydrate). *Orndorff* and *Delbridge* 26

(3) 4,5,5′-Trihydroxy-4′-keto-7-[3,4,5,6-tetrachlor-2-trihydroxymethylphenyl]-1′,4′-dihydroxanthane (colored tetrachlorgallein hydrate. *Orndorff* and *Delbridge* 21

$C_{20}H_{11}O_6Cl_5$. 4′-O-Hydrochloride of 4,5,5′-trihydroxy-4′-keto-7-[3,4,5,6-tetrachlor-2-trihydroxymethylphenyl]-1′,4′-dihydroxanthane (hydrochloride of colored tetrachlorgallein hydrate). *Orndorff* and *Delbridge* 30, 46

$C_{20}H_{12}O_9Cl_4$. 4,5,7,4′,5′-Pentahydroxy-7-[3,4,5,6-tetrachlor-2-trihydroxymethylphenyl]xanthane (hydrated tetrachlorgalleincarbinolcarboxylic acid). *Orndorff* and *Delbridge* 37

$C_{20}H_{17}O_5Br$. Compound from dimethyl δ-keto-β,δ-diphenyl-β-butene-α,α-dicarboxylate and Br. *Kohler* 486

$C_{20}H_{18}O_5Br$. Stereomeric dimethyl esters of α,γ-dibrom-δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid. *Kohler* 484

$C_{20}H_{21}O_3Br$. Methyl ester of δ-brom-ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 232

C_{11}-GROUP

21 II

$C_{21}H_{24}O_3$. Ethyl ester of ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 230

21 III

$C_{21}H_{23}O_3Br$. Ethyl ester of δ-brom-ε-keto-β-methyl-γ,ε-diphenylpentane-β-carboxylic acid. *Kohler, Heritage* and *Macleod* 232

21 IV

$C_{21}H_{13}O_3NBr_2$. 2,4-Dibrom-6-benzoylamino-3-methylphenyl ester of benzoic acid. *Raiford* 432

$C_{21}H_{16}O_3NCl$. 2-Chlor-4-benzoylamino-5-methylphenyl ester of benzoic acid. *Raiford* 444

C_{22}-CROUP

22 II

$C_{22}H_{18}O_2$. Lactone of γ-hydroxy-α,γ,γ-triphenylpropane-α-carboxylic acid. *Reynolds* 204

$C_{22}H_{24}O_5$. Diethyl ester of δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid. *Kohler* 482

22 III

$C_{22}H_{23}O_5Br$. Stereomeric diethyl esters of γ-brom-δ-keto-β,δ-diphenylbutane-α,α-dicarboxylic acid. *Kohler* 482

C_{24}-GROUP

24 III

$C_{24}H_{18}O_8Cl_4$. 7[2]-Carbonyl etherate of the 7-lactone of 4,5,7,4′,5′-pentahydroxyxanthane - 7 - [3,4,5,6 - tetrachlorbenzene - 2 - carboxylic acid] (tetrachlorgallein etherate). *Orndorff* and *Delbridge* 14

C_{25}-GROUP

$C_{25}H_{24}O$. β - Hydroxy - β - phenylmethyl - α,ζ - diphenyl - γ,ε - hexadiene. *Reynolds* 207

25 III

$C_{25}H_{24}OBr$. ε,ζ - Dibrom - β - keto - δ - phenylmethyl - α,ζ - di - phenylhexane. *Reynolds* 207

$C_{25}H_{24}OBr_4$. $\gamma,\delta,\varepsilon,\zeta$ - Tetrabrom - β - hydroxy - β - phenylmethyl - α,ζ-diphenylhexane. *Reynolds* 207

C_{26}-GROUP

26 III

$C_{26}H_{20}O_8Cl_4$. 7,4′-Isopropylidene ether of 4,5,7,4′,5′-pentahydroxyxanthane-7 - [3,4,5,6 - tetrachlor-2 - trihydroxymethylbenzene isopropylidene ether] (tetrachlorgallein diacetonate). *Orndorff* and *Delbridge* 3

C_{28}-GROUP

28 III

$C_{28}H_{18}O_{11}Cl_4$. Tetracetate of the 7-lactone of 4,5,7,4′,5′-pentahydroxyxanthane - 7 - [3,4,5,6 - tetrachlorbenzene - 1- carboxylic acid] (tetrachlorgallein tetracetate). *Orndorff* and *Delbridge*. 51

C_{29}-GROUP

29 II

$C_{29}H_{26}O$. α - Hydroxy - $\alpha,\alpha,\gamma,\varepsilon$ - tetraphenyl - δ - pentene. *Reynolds* 203

ERRATA

P. 225, l. 3 from the bottom, γ-benzal-β-phenyl-α-methylbutyric should be γ-benzoyl-β-phenyl-α-methylbutyric.

P. 226, l. 5 from the bottom, ester should be acid.

P. 232, l. 22, $C_{20}H_{19}O_2Br$ should be $C_{20}H_{21}O_3Br$.

P. 335, l. 14 from the bottom, chlorimido-p-methoxybenzophenone should be imido-p-methoxybenzophenone.

P. 352, l. 16 from the bottom, $C_{12}H_{14}O_3N_2S$ should be $C_{12}H_{14}O_6N_2S$.

P. 356, l. 12, $C_2H_{12}O_3N_2S$ should be $C_9H_{12}O_2N_2S$.

P. 491, l. 11, $C_{17}H_{14}O_8Br$ should be $C_{17}H_{14}O_8Br_2$.